

GREEN MATTERS

A newsletter from the Alberta Environmentally Sustainable Agriculture Council

Courtesy Alberta Agriculture, Food and Rural Development



Reframing the Regulatory Framework for Livestock

The livestock industry wants to grow in a sustainable manner.

"The public wants to be assured that the environment and public health are protected," says Andrew Hudson, "and the livestock industry wants to be able to grow in a sustainable manner." These are the two key factors behind the recent push to improve the regulatory framework for Alberta's livestock industry.

Hudson is a member of the Livestock Regulations Stakeholder Advisory Group (LRSAG). LRSAG was formed in August 1998 to help the province develop a draft regulatory framework that would meet the concerns of all stakeholders. Hudson also recently joined the Alberta Environmentally Sustainable Agriculture (AESA) Council, replacing Donna Tingley as representative of the Environmental Law Centre.

The process for regulatory change started in January 1998 when the Hon. Ed Stelmach, the Agriculture Minister at the time, asked for an examination of the way Alberta's livestock industry could be regulated. His request was prompted by concerns from the public, including the livestock industry, municipalities, environmental groups and others, about the approval process for new facilities and the need to ensure existing facilities operate in a way that protects the environment.

Alberta Agriculture, Food and Rural Development, working with Alberta Environmental Protection, Alberta Health and Alberta Municipal Affairs, produced a discussion paper on regulatory options in March 1998. The government hosted open houses across the province and collected stakeholder input with a mail-in questionnaire.

"Stakeholder input on the regulatory options was very diverse," says Maureen Barnes of Alberta Agriculture. "However, there was widespread agreement that the current regulatory system needs change." (See "*A mosaic of perspectives.*") Barnes has been one of the facilitators in the process to review and revise the regulatory framework.

The wide range of perspectives on just what improvements are needed prompted the Alberta Government to create the LRSAG. This 10-member group has representatives from the Alberta Chicken Producers, Alberta Association of Municipal Districts and Counties, Alberta Urban Municipalities Association, Provincial Health Authorities of Alberta, Alberta Pork, Environmental Law Centre, Alberta Cattle Feeders Association, Alberta Milk Producers, Alberta Cattle Commission and the general public.

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Issue No. 2, Fall 1999

Livestock

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The group prepared an initial framework of legislation for intensive livestock operations for public consultation in January 1999. A number of concerns were expressed about the framework, dealing primarily with public participation, enforcement, threshold levels for registrations and approvals, and the authority of municipalities. Over the spring and summer, the LRSAG members met and consulted with other stakeholders to clarify these issues and to develop a draft act and regulations. During this period an Expert Committee was formed to advise the LRSAG on standards for the construction and operation of livestock facilities and the use of manures (see "*The phosphorus issue*").

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participants”

The advisory group's draft Act, Regulations and Standards Document are now available for public input. After feedback is gathered, the LRSAG will make recommendations to the Hon. Ty Lund, Minister of Agriculture, Food and Rural Development, on how to proceed.

“Although the framework represents a consensus of all the participants,” Hudson notes, “there are still some areas where people wish it could be different.” It has been an intense process. “There were people who had strong feelings, and I had strong feelings, on what changes were needed,” he says. “And it was time consuming – a lot of work went into the framework by the group and the government employees who assisted us.”

You can get copies of the proposed framework from Alberta Agriculture district offices, at <http://www.agric.gov.ab.ca/filo> on the Internet, or by calling 780-422-2070. As well, the LRSAG is holding information sessions in October at Lethbridge, Red Deer, Vegreville, Barrhead and Fairview. The deadline for input is November 1, 1999. For more details on the information sessions, visit the above web site or call Maureen Barnes at 780-427-4369.

A Mosaic of Perspectives

The existing system of municipal development permits and provincial guidelines in the Code of Practice for livestock operations, drew diverse comments during the stakeholder consultations. To give you an idea of the range of viewpoints the LRSAG had to bring together, here are some samples (from the report *Albertans Discuss Regulatory Options for Livestock Operations*):

- **Livestock industry groups:** Most of the respondents were dissatisfied with the current development permitting process, citing inconsistent processes and requirements around the province as the main reason. Concerns were often expressed about municipalities' lack of expertise in assessing technical aspects of developments and about local politics preventing objective decisions. Although most agreed that municipalities should continue to control land use, they wanted more provincial involvement. Some groups thought that provincial standards with accountability would give the public confidence that livestock operations are operating responsibly. Others felt that the existing provincial guidelines should continue to be the voluntary operating standard.
- **Municipalities:** Most responding municipalities felt that they do not have the expertise to make approval and enforcement decisions. Some wanted provincial involvement to create more consistency across Alberta and to bring in provincial technical knowledge and resources to approve operations. Others felt that municipalities are closer to the issues, the people and the district, allowing them to make more knowledgeable decisions. If municipalities maintain control of approvals, they want more support from the Province. If

they give up this control, they want roles and jurisdictions clearly defined.

- **Individual livestock producers:** There were diverse opinions in this group. Some stated that the current system is already too restrictive, while others felt that comprehensive, strict regulations are required at the provincial and federal levels. Most felt that they would benefit from clear, realistic operating 'rules' that are widely recognized as the best practices. Most stated that there is a need to ensure compliance through better enforcement, but there was no consensus on how to do this.
- **Concerned citizens:** Most of these respondents had concerns related to specific situations directly affecting them. Views ranged from wanting a complete stop to any expansion of intensive animal agriculture in Alberta, to advocating an industry-driven approach to self-regulation. Most wanted provincial approvals, mandatory operating requirements and provincial enforcement of the rules. “No Grandfathering” was a repeated theme, as was swift enforcement and harsh punishments for non-compliance.
- **Environmental organizations:** All of the formal submissions by recognized environmental organizations were very prescriptive, with most advocating significant provincial involvement in regulating livestock operations.

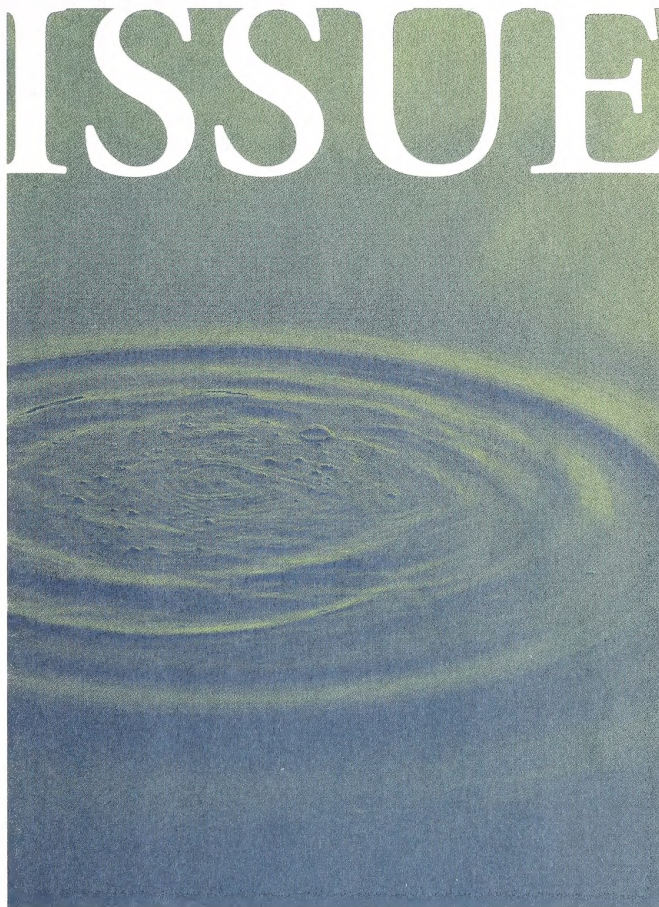
More information on public input is available from Maureen Barnes of Alberta Agriculture at 780-427-4369 or from <http://www.agric.gov.ab.ca/economic/policy/filo/discuss.html>.



Courtesy Alberta Agriculture, Food and Rural Development

THE PHOSPHORUS

“Recent research shows that phosphorus is a key water quality issue in Alberta.”



The proposed regulatory framework uses the nitrogen content of manure and soil as a basis for determining rates for applying manure on land. Too much nitrogen can cause surface and ground water contamination and can harm crop growth. So nitrogen-based manure rates are a good first step in protecting water quality and ensuring good crop production. But what about phosphorus, that other key nutrient in manure?

The Expert Committee on Regulatory Standards for Intensive Livestock Operations advised the LRSAG on standards for livestock operations, including the use of manures. It recommended that nitrogen-based manure application rates be used for now, but that the regulations be revised to phosphorus-based rates within two years. (The Expert Committee included a health officer, a municipal development officer, academics and livestock producers.)

“Recent research shows that phosphorus is a key water quality issue in Alberta,” explains Allan Howard, a soils specialist with Alberta Agriculture. “This is because of the naturally high levels of phosphorus in our lakes and the increasing amount of phosphorus-bearing materials being applied to land – not just from manure, but from municipal and industrial sources as well.”

Excess phosphorus can increase the growth rate of algae blooms and aquatic weeds, which can have serious consequences. For example, when algae blooms die and decompose, the decomposition uses up the dissolved oxygen that fish and other aquatic organisms need to live. As well, water containing toxins from periodic blue-green algae blooms can be harmful to livestock, pets and wildlife. And algae blooms can cause water to have a foul taste and odour.

“When we apply nitrogen-based rates of manure, we’re overapplying for the crop’s phosphorus needs,” explains Howard. “And continuous over-application of phosphorus will lead to excess phosphorus on the land, which increases the risk of runoff and erosion carrying phosphorus to streams and lakes. However, we need accurate information to determine how much phosphorus we can apply to the soil under Alberta conditions without degrading water quality, and that information is just now being developed.”

A major source of this information will be research underway at Alberta Agriculture with support from the Canada-Alberta Beef Industry Development Fund and the Canada-Alberta Hog Industry Development Fund. The recommended two-year waiting period before phosphorus-based manure rates are introduced would allow time to include the results from such research. AESA has provided some funding for an analysis of current and past levels of soil phosphorus. As well, AESA Council has a representative on the

stakeholder steering committee responsible for developing phosphorus standards.

“Changing to phosphorus-based manure rates will likely mean that less manure will be applied per acre in the future, especially to areas sensitive to phosphorus additions,” explains Howard. “It would make good sense to plan for a larger land base on which to apply manure, especially if you are planning to build a new development or expand an existing one. It is also important to keep in mind that applying manure based on phosphorus content will likely mean that the manure won’t meet the crop’s nitrogen needs, so additional nitrogen fertilizer may be required.”

For more information on manure research and management practices, try Manure Happenings (<http://www.fbminet.ca/manure/>) and ManureNet (<http://res.agr.ca/manurenet/>), or call Darcy Fitzgerald of Alberta Agriculture (403-340-4822), or your Alberta Agriculture regional conservation coordinator.

MAKING CHANGE HAPPEN

“An effective Geographic Information

System can alert planners to the...potential

for adverse environmental impacts.”

The AESA Program is supporting a wide range of activities to reduce the environmental risk that may be associated with improperly managed livestock operations. For example,

projects under AESA's Farm Based Component include demonstrations, applied research and workshops on such topics as feedlot siting and design, manure composting, timing of manure spreading, equipment options for spreading, effect of manure on weeds, and manure application rates based on crop nutrient needs.

Six municipalities have projects using geographic information systems (GIS) to address feedlot siting as well as many other issues. “An effective GIS can alert planners to the existence of or potential for adverse environmental impacts of various activities,” says Troy Ormann, conservation technician with the County of Lethbridge. The County has teamed up with Alberta Agriculture, PFRA, and the Oldman River Intermunicipality Service to build a GIS with data on livestock operations, drainage systems, soil, elevation, weeds, water table depths and other information.

“For feedlot siting, we could use the database to calculate minimum distances from neighbours (mostly an odour issue) or distances from waterways (for water quality). Or a developer might say ‘I believe that the water table is 10 feet below the surface’, but our GIS data might show a nearby well with a water table that’s only two feet deep. We’d ask him to have the water table depth checked because a shallow water table is at greater risk of contamination.” The GIS can also be used for a wide range of activities, from tracking the size and distribution of the livestock population in the County, to assessing the effectiveness of the County’s weed control efforts, to mapping routes for emergency vehicles.

Other Farm Based projects are looking at ways to minimize the amount of phosphorus that moves into streams and lakes. For instance, the County of Lethbridge, in partnership with Alberta Agriculture and a local producer, is examining how much phosphorus is taken up by different types of forage. “Repeated manure applications can raise phosphorus levels in soil,” explains Ormann. “This project will help to identify crops that could reduce phosphorus buildup and so decrease the risk of phosphorus moving into surface water systems.”

For more information on Farm Based projects, contact Therese Tompkins of Alberta Agriculture at 780-427-3588 or visit <http://www.agric.gov.ab.ca/sustain/aesafarmbaseindex.html>.



Dean Jeffrey Photography



John Kolk

"For our family, it's important to put something back into whatever you're involved in. Society only works well if people take care of their private life and get involved in the public sphere," says John Kolk. He puts this belief into practice by serving on AESA Council and other agencies to better agriculture, the environment and his community.

Kolk is a partner in Kolk Farms Ltd., along with his brother Leighton, their spouses and parents. They have a broiler chicken operation and a feedlot near Picture Butte. Kolk has been a member of the Alberta Chicken Producers for about seven years. He's also been Alberta's representative on the Chicken Farmers of Canada since 1993 and recently completed two years as chairman. On AESA Council, Kolk represents the Alberta Poultry Industry Council.

"AESA Council is not strictly one commodity group or just farmers," notes Kolk. "It's got processors, fish and game people, and other stakeholders ... And it's more focused on emerging issues. The greenhouse gas issue is a good example. Producers aren't yet that excited about getting involved in this issue, but the more we learn about it, the clearer it becomes that we need to get involved."

As Deputy Reeve for the County of Lethbridge, Kolk has a keen interest in emerging environmental issues. "The County of Lethbridge is the most densely populated municipality in Alberta in terms of animal units. So whatever issues there are in animal agriculture, they come to the fore here." But being at the fore of an issue can also mean being in front with solutions. "A few years ago, the issue was water quality," he says. "The County has been part of the multi-agency Oldman River Basin Water Quality Initiative. That initiative has helped to highlight where livestock producers can improve. It's also provided data showing that the problems are not just from livestock. So we've been able to move from finger-pointing to working together to find solutions."

AESA's focus on the environment fits with Kolk's basic beliefs. "I really believe we have to take care of creation. Even though you're trying to make a living, you also want to leave the environment in a better condition than when you started. That's why being a good environmental steward is compatible with being a good farmer."

Frank Fallwell

"Awareness is the uppermost factor in making change," says Frank Fallwell. "If you've been to Disneyland, you'll know that they set such a good example in keeping the grounds clean that you'd be embarrassed to litter. You naturally follow their example. That's how we need to approach the agriculture and food processing industry. If producers and processors are really good stewards of the environment, others will follow their example. That's what I'd like to come out of AESA."

Fallwell joined AESA Council this year as the new representative for Growing Alberta, replacing Don Fluney. Although Fallwell is new to AESA, he has a long history in food processing.

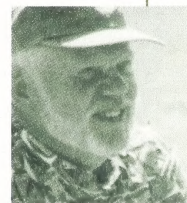
"I've been in the fish business for 45 years. Our company, Billingsgate Fish, was founded by my grandfather in 1907." Billingsgate is the only federally inspected fish processor in Alberta. Fallwell was president of Billingsgate from 1988 until 1996, when he became chairman and his son Brian became president.

Fallwell has been a long-time member of the Alberta Food Processors Association and was chairman in 1985-86. He was appointed to the Alberta Agricultural Marketing Council in 1990 and has been chairman since 1996. His association with Growing Alberta began in 1998 when he became a member of the Agriculture and Food Council. Growing Alberta is one of its programs. Earlier this year, Fallwell was elected as the chair of

Growing Alberta and so became its new representative on AESA Council.

"Growing Alberta," explains Fallwell, "is an industry-driven communications program designed to tell Albertans about agriculture's impact on Alberta's economy, quality of life and the environment." He notes that Growing Alberta and AESA can gain from working together. "Both Growing Alberta and AESA are interested in communications on clean air, clean water and safe food ... To AESA Council, I can bring Growing Alberta's strengths in public communications. To Growing Alberta, I can bring back information on emerging issues."

Says Fallwell, "AESA Council can be a focal point for people with concerns or who want to know more about issues like manure management, intensive livestock operations, greenhouse gases and so on." And with information and understanding, comes change.



Dean Jeffrey Photography

The AESA Program was created in July 1997, based on consultations with representatives from the agriculture and food processing industry and environmental groups. Those consultations showed the need for targeted environmental programming in agricultural production and processing. In response, the Alberta Government created the AESA Program and the AESA Council, the program's guiding body.

The consultations also identified water quality, soil quality, air quality and biodiversity as the four priority issues for the industry. And those priorities became AESA's priorities.

The aim of this long-term, provincially funded program is to facilitate the development and adoption of environmentally sustainable management practices and technologies. Through its four main components, the AESA Program supports:

- research to minimize the industry's impact on the environment
- transfer of new technology and information for minimizing environmental impacts, to farmers, ranchers and processors
- monitoring of soil and water quality to track the industry's effects on these resources

Partnering: The Key to Success

The strength of any structure depends on its foundation. AESA Council's foundation is a commitment by all sectors of Alberta's agriculture and food industry to sustainability. Council's diverse membership brings a wide range of views and expertise to the environmental challenges faced by the industry in providing a safe, reliable and abundant food supply.

Caring for the environment is crucial for the long-term sustainability of our industry. We are constantly faced with new challenges to the way we operate, to ensure that we protect the quality of our soil, water and air. It is only through education and collaboration that we can achieve the widespread adoption of practices that will protect the environment and enhance our industry's image. We know that by partnering with other individuals and agencies, we will succeed in finding solutions.

The AESA Program focuses on partnering to achieve its goals – on projects where agencies work together to achieve mutual objectives. It provides funding to develop new information and track change through the Research and Resource Monitoring components. It takes the cooperation of research agencies, governments and individuals, to achieve reliable results.

AESA's Farm Based and Processing Based components provide funding to agricultural organizations, municipalities, processors, environmental groups and First Nations to develop and communicate new techniques both on the land and in the processing plant. These projects are especially effective as they are designed and implemented to meet local concerns, often bringing together two or more groups and many individuals in a collaborative effort.

Alberta Agriculture, Food and Rural Development is committed to programs such as this, that will lead us into the next century, confident in an environmentally sustainable and profitable agriculture and food industry to the benefit of all Albertans.

Honourable Ty Lund
Minister of Agriculture, Food and
Rural Development



Honourable Ty Lund



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Editorial Board: Bruce Beattie, John Kolk, Dave Ritchie

Editor: Carolyn King

Contributors: Carolyn King, Maureen Barnes, Bruce Beattie

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